

What is claimed is:

1. A method of fixing a part and a part support for mounting said part by use of photocuring adhesive via an intermediate member formed of resin transparent for light, said method comprising the steps of:

radiating light for curing the adhesive; and

cutting a part of the light lying in a wavelength range causing a property of the intermediate member to change.

2. A method as claimed in claim 1, wherein the part of the light to be cut is UV (Ultra Violet) rays lying in a short wavelength range.

3. A method as claimed in claim 2, wherein the short wavelength range is below about 300 nm inclusive.

4. A method as claimed in claim 1, wherein the part of the light to be cut is UV rays lying in a short wavelength range and thermic rays lying in a long wavelength range.

5. A method as claimed in claim 1, further comprising the steps of:

providing a light guide implemented by a photoconductive material for guiding the light to a position for illuminating the adhesive; and

positioning a bandpass filter on an output optical path of said light guide.

6. A method as claimed in claim 1, further comprising the step of sending air toward the intermediate member during radiation of the light.

7. An apparatus for fixing a part and a part support for mounting said part via an intermediate member formed of resin transparent for light and contacting said part and said part support, said apparatus comprising:

applying means for applying photocuring adhesive to interfaces between said part, said part support and said intermediate member;

radiating means for radiating light to said interfaces via said intermediate member; and

a bandpass filter positioned on an optical path for the light for cutting a part of said light lying in a wavelength range causing a property of the intermediate member to change.

8. A method of fixing a part and a part support for mounting said part via an intermediate member by using adhesive, said method comprising the steps of:

positioning the intermediate member between the part and the part support;

applying adhesive to a substantially vertical first interface and a substantially horizontal second interface between the part and the part support and the intermediate member;

causing pressing means to press the intermediate member against the part and the part support; and

causing the adhesive applied to said first interface and said interface to spread.

9. A method as claimed in claim 8, wherein said pressing means

comprises a single pin movable toward and away from the intermediate member in a direction angled such that substantially identical components of a force act on said first interface and said second interface.

10. A method as claimed in claim 8, wherein said pressing means comprises two pins movable toward and away from the intermediate member in a direction substantially perpendicular to said first interface and a direction substantially perpendicular to said second interface, respectively.

11. A method as claimed in claim 8, wherein said pressing means comprises a single air nozzle for sending air toward the intermediate member in a direction angled such that substantially identical components of a force act on said first interface and said second interface.

12. A method as claimed in claim 11, wherein said air nozzle has nozzle holes for blowing air onto substantially entire areas of said first interface and said second interface.

13. A method as claimed in claim 8, wherein said pressing means comprises two air nozzles for blowing air toward the intermediate member in a direction substantially perpendicular to said first interface and a direction substantially perpendicular to said second interface, respectively.

14. A method as claimed in claim 13, wherein said air nozzles have nozzle holes for blowing air onto substantially entire areas of said first interface and said second interface.

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15. A method as claimed in claim 8, wherein said pressing means comprises a single air nozzle including two nozzle holes for blowing air toward the intermediate member in a direction substantially perpendicular to said first interface and a direction substantially perpendicular to said second interface, respectively.

16. A method as claimed in claim 15, wherein said nozzle holes blow air onto substantially entire areas of said first interface and said second interface, respectively.

17. A method as claimed in claim 8, wherein said pressing means comprises a plurality of pins movable toward and away from and substantially perpendicularly to said first interface and a plurality of pins movable toward and away from and substantially parallel to said first interface.

18. An apparatus for fixing a part and a part support for mounting said part by using adhesive with the intermediary of an intermediate member provided between said part and said part support, said apparatus comprising:

part support holding means for positioning and holding the part support at a preselected assembling position;

part supporting means for supporting the part in a position adjustable relative to the part support held by said part support holding means;

position detecting means for detecting a position of the part supported by said part supporting means;

position adjusting means for adjusting, based on the position

detected by said position detecting means, a position in which the part should be mounted to the part support held by said part support holding means;

adhesive applying means for applying the adhesive to a substantially vertical first interface and a substantially horizontal second interface between the part and the intermediate member and between the part support and said intermediate member; and

pressing means for pressing the intermediate member against the part and the part support to thereby cause the adhesive applied to said first interface and said second interface to spread.

19. An apparatus as claimed in claim 18, wherein the part comprises an ink jet head included in an ink jet printer.

20. A method of fixing a part and a part support for mounting said part via an intermediate member by using adhesive said method comprising the steps of:

positioning the intermediate member between the part and the part support; and

applying adhesive to a substantially vertical first interface and a substantially horizontal second interface between the part and the intermediate member and between the part support and said intermediate member

the adhesive to be applied to said first interface having higher viscosity than the adhesive to be applied to said second interface.

21. A method as claimed in claim 20, wherein the adhesive to

be applied to said first interface has viscosity causing said adhesive to spread downward due to gravity over an area double an area of said adhesive initially applied.

~~23. An apparatus for fixing a part and a part support for mounting said part by using adhesive with the intermediary of an intermediate member provided between said part and said part support, said apparatus comprising:~~

part supporting means for supporting the part in a position adjustable relative to the part support held by said part support holding means;

position detecting means for detecting a position of the part supported by said part supporting means;

position adjusting means for adjusting, based on the position detected by said position detecting means, a position in which the part should be mounted to the part support held by said part support holding means; and

adhesive applying means for applying the adhesive to a substantially vertical first interface and a substantially horizontal second interface between the part and the intermediate member and between the part support and said intermediate member;

said adhesive applying means comprising first applying means and second applying means for applying the adhesive to said first interface and said second interface, respectively, the adhesive to be applied by said first applying means has higher viscosity than the adhesive to be applied by said second applying means.

24. An apparatus as claimed in claim 23, wherein the part comprises an ink jet head included in a printer.

25. A method of fixing a part and a part support for mounting said part via an intermediate member by using adhesive, said method comprising the steps of:

positioning the intermediate member between the part and the part support;

applying adhesive to a substantially vertical first interface and a substantially horizontal second interface between the part and the intermediate member and between the part support and said intermediate member; and

half-curing, before a relative position of the part and the part support is adjusted, the adhesive applied to said first interface to a degree preventing said adhesive from dropping due to an own weight.

26. A method as claimed in claim 25, wherein the adhesive comprises photocuring adhesive.

27. A method as claimed in claim 26, further comprising the step of radiating, before a relative position of the part and the part support is adjusted, light of an amount capable of half-curing the

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photocuring adhesive.

28. A method as claimed in claim 25, further comprising the steps of:

adjusting a relative position of the part and the part support in a horizontal direction after half-curing of the adhesive applied to said first interface;

half-curing the adhesive applied to said second interface to a higher degree than the adhesive applied to said first interface; and

adjusting a relative position of the part and the part support in a vertical direction.

29. A method as claimed in claim 25, further comprising the steps of:

forming a recess in at least one of the part support and the part in a lower portion of said first interface; and

causing said recess to stop the adhesive applied to said first interface and dropping.

30. An apparatus for fixing a part and a part support for mounting said part by using adhesive with the intermediary of an intermediate member provided between said part and said part support, said apparatus comprising:

part support holding means for positioning and holding the part support at a preselected assembling position;

part supporting means for supporting the part in a position adjustable relative to the part support held by said part support

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position detecting means for detecting a position of the part supported by said part supporting means;

position adjusting means for adjusting, based on the position detected by said position detecting means, a position in which the part should be mounted to the part support held by said part support holding means; and

adhesive curing means for curing the adhesive applied to a substantially vertical first interface and a substantially horizontal second interface between the part and the intermediate member and between the part support and said intermediate member; and

control means for controlling a degree of curing of the adhesive to be cured by said adhesive curing means and selecting either one of said first interface and said second interface for effecting the curing.

31. An apparatus as claimed in claim 30, wherein the part comprises an ink jet head included in a printer.